ABSTRACT OF THE DISCLOSURE

A scheduler of central processing unit (CPU) usage arranges tasks in a plurality of classes, associating a given task with a top level class and a sub-class. Weights may be associated with sub-classes and usage targets associated with top level classes. A target CPU usage may then be determined for the given task from a weight and a target CPU usage. Once an actual usage of the CPU by the given task is determined in a first predetermined evaluation interval, a penalty duration may be determined for the given task based on the actual usage and the target CPU usage. A penalty may then be applied to the given task for the penalty duration during a second predetermined evaluation interval.